

Project 5 Write Up

Write Up:

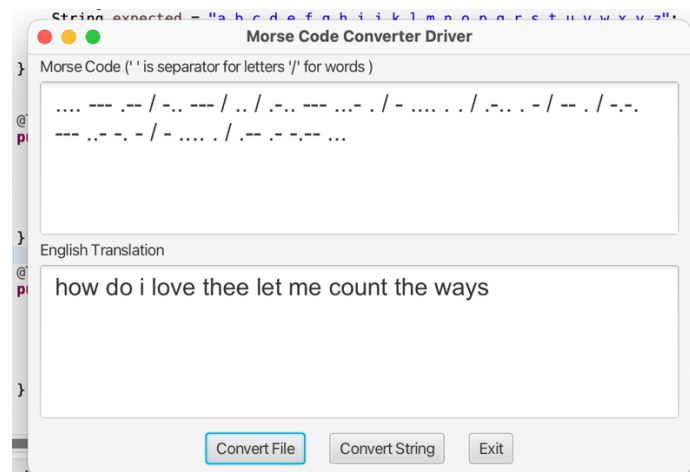
In my project, I developed a Morse Code Converter Utility using a generic linked binary tree with generic `TreeNode`s to convert Morse Code into English. The project involved creating several classes, including generic classes for the tree structure and a utility class with static methods for the conversion process.

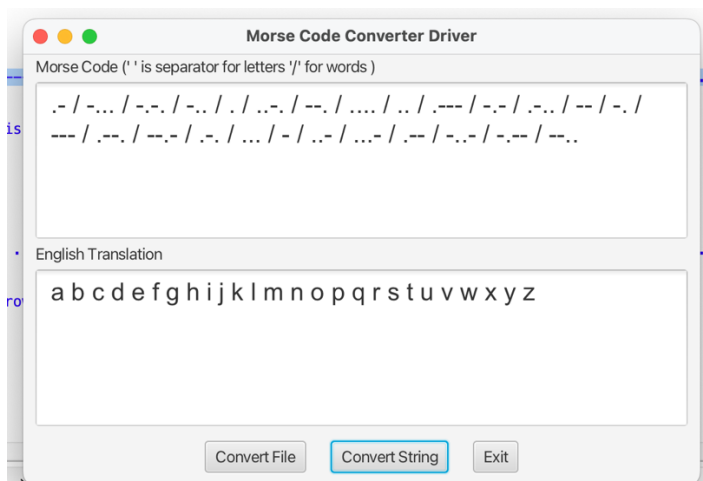
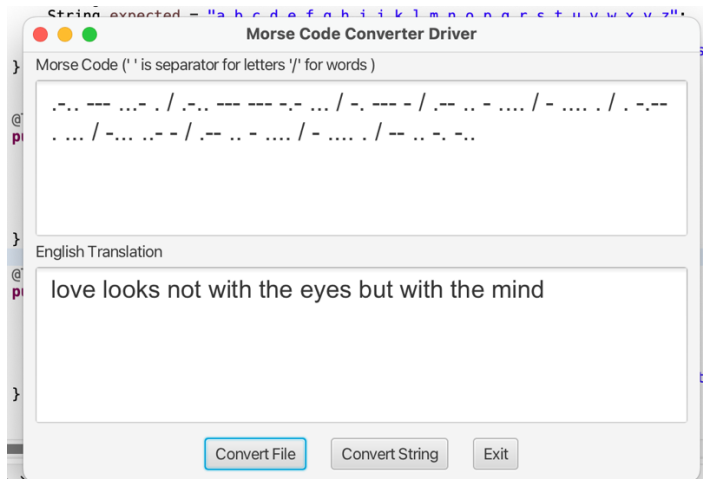
During testing, I ran various test cases to ensure comprehensive coverage. The JavaFX GUI, used for testing, displayed accurate translations for each Morse code character, effectively handled uncommon sequences, and provided clear error messages for invalid inputs. The system also maintained smooth performance when processing large batches of inputs.

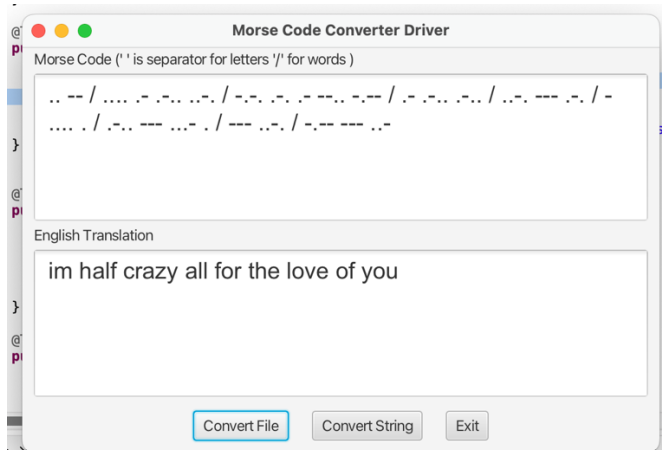
The results of my tests matched my expectations perfectly, highlighting the reliability of my implementation. After thorough testing and seeing the accurate results, I'm confident that my project will pass sets of private test cases. This project has significantly improved my understanding of data structures, error handling, and performance optimization.

I assumed that users would generally provide valid Morse code inputs and use the **MorseCodeDriverFX-main** when running the GUI. This project was a bit frustrating at times and I ran into a few problems with the translate to English string not being translated correctly. I had some issues with spacing which turned out to be the problem.

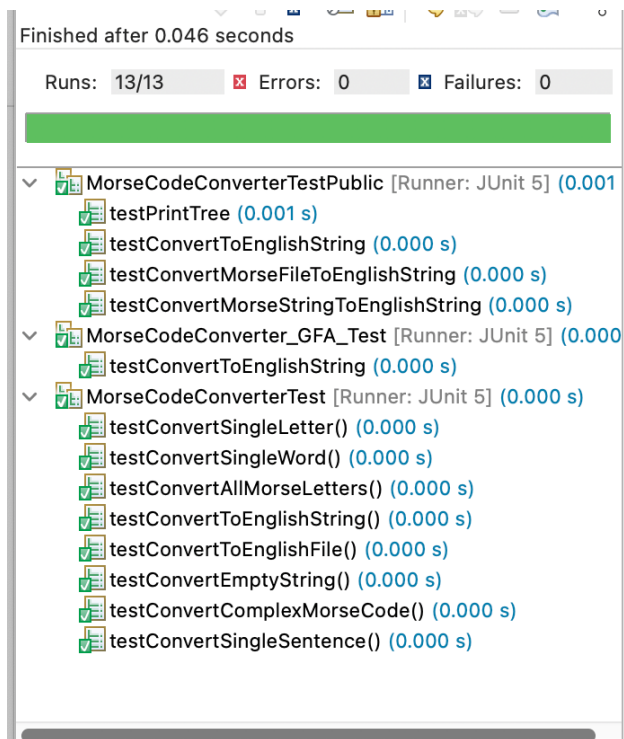
Test Runs:







JUnit Runs:



Finished after 0.025 seconds

Runs: 1/1 Errors: 0 Failures: 0

▼ MorseCodeConverter_GFA_Test [Runner: JUnit 5] (0.001 s)

testConvertToEnglishString (0.001 s)

Finished after 0.044 seconds

Runs: 8/8 Errors: 0 Failures: 0

▼ MorseCodeConverterTest [Runner: JUnit 5] (0.001 s)

testConvertSingleLetter() (0.001 s)

testConvertSingleWord() (0.000 s)

testConvertAllMorseLetters() (0.000 s)

testConvertToEnglishString() (0.000 s)

testConvertToEnglishFile() (0.000 s)

testConvertEmptyString() (0.000 s)

testConvertComplexMorseCode() (0.000 s)

testConvertSingleSentence() (0.000 s)

Finished after 0.024 seconds

Runs: 4/4 Errors: 0 Failures: 0

▼ MorseCodeConverterTestPublic [Runner: JUnit 5] (0.000 s)

testPrintTree (0.000 s)

testConvertToEnglishString (0.000 s)

testConvertMorseFileToEnglishString (0.000 s)

testConvertMorseStringToEnglishString (0.000 s)